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DEPARTMENT OF SOFTWARE ENGINEERING

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COURSE

CLOUD COMPUTING LAB

SUBMITTED TO

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“LAB 12”

INSTALL CONFIGURE GLANCE ON OPENSTACK ROCKY UBUNTU 18

STEP 1

CREATE DATABASE GLANCE

```
fjwu@controller:~$ sudo su -
root@controller:~# mysql
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 30
Server version: 10.1.48-MariaDB-0ubuntu0.18.04.1 Ubuntu 18.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

```
root@controller:~# mysql
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 30
Server version: 10.1.48-MariaDB-0ubuntu0.18.04.1 Ubuntu 18.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> GRANT ALL PRIVILEGES ON glance.* TO 'glance'@'localhost' IDENT
IFIED BY 'glanceDBPass';
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]>
```

```
MariaDB [(none)]> GRANT ALL PRIVILEGES ON glance.* TO 'glance'@'%' IDENTIFIED BY
 'glanceDBPass';
Query OK, 0 rows affected (0.01 sec)

MariaDB [(none)]>
```

```
MariaDB [(none)]> exit
Bye
root@controller:~#
```

STEP 2

ENTERED THE PASSWORD “GLANCEDBPASS”

```
fjwu@controller: ~
fjwu@controller:~$ source admin-openrc
```

```
fjwu@controller:~$ openstack user create --domain default --password-prompt glan
ce

Command 'openstack' not found, but can be installed with:

sudo snap install openstackclients         # version xena, or
sudo apt  install python-openstackclient
sudo apt  install python3-openstackclient
```

```
fjwu@controller:~$ sudo apt install openstackclients
```

```
fjwu@controller:~$ sudo snap install openstackclients
2024-01-02T12:05:27+05:00 INFO Waiting for automatic snapd restart...
openstackclients (yoga/stable) yoga from Canonical✓ installed
fjwu@controller:~$ openstack user create --domain default --password-prompt glan
ce
User Password:
Repeat User Password:
+---------------------+----------------------------------+
| Field               | Value                            |
+---------------------+----------------------------------+
| domain_id           | default                          |
| enabled             | True                             |
| id                  | 9f9915e48d024987be257dead5de9c41 |
| name                | glance                           |
| options             | {}                               |
| password_expires_at | None                             |
+---------------------+----------------------------------+
```

CREATE SERVICE

```
fjwu@controller:~$ openstack role add --project service --user glance admin
```

```
fjwu@controller:~$ openstack service create --name glance --description "TheSkil
lPedia OpenStack Image" image
+-------------+----------------------------------+
| Field       | Value                            |
+-------------+----------------------------------+
| description | TheSkillPedia OpenStack Image    |
| enabled     | True                             |
| id          | 77a8311bf45749b3b2d47287520c52f2 |
| name        | glance                           |
| type        | image                            |
+-------------+----------------------------------+
```

```
fjwu@controller: ~
+-------------+----------------------------------+
fjwu@controller:~$  openstack service list
+----------------------------------+----------+----------+
| ID                               | Name     | Type     |
+----------------------------------+----------+----------+
| 77a8311bf45749b3b2d47287520c52f2 | glance   | image    |
| d64038d46e4d4c65be28543036dc01cb | keystone | identity |
+----------------------------------+----------+----------+
fjwu@controller:~$ openstack endpoint create --region RegionOne image public htt
p://controller:9292
+--------------+----------------------------------+
| Field        | Value                            |
+--------------+----------------------------------+
| enabled      | True                             |
| id           | cd06c95c447240dea56c625b05d722c7 |
| interface    | public                           |
| region       | RegionOne                        |
| region_id    | RegionOne                        |
| service_id   | 77a8311bf45749b3b2d47287520c52f2 |
| service_name | glance                           |
| service_type | image                            |
| url          | http://controller:9292           |
+--------------+----------------------------------+
```

STEP 3

CREATE ENDPOINTS

ENDPOINT PUBLIC

```
fjwu@controller:~$ openstack endpoint create --region RegionOne image admin http
://controller:9292
+--------------+----------------------------------+
| Field        | Value                            |
+--------------+----------------------------------+
| enabled      | True                             |
| id           | 9d89952a6cfc4c849c846253c76f0502 |
| interface    | admin                            |
| region       | RegionOne                        |
| region_id    | RegionOne                        |
| service_id   | 77a8311bf45749b3b2d47287520c52f2 |
| service_name | glance                           |
| service_type | image                            |
| url          | http://controller:9292           |
+--------------+----------------------------------+
```

```
fjwu@controller:~$ openstack endpoint create --region RegionOne image internal h
ttp://controller:9292
+--------------+----------------------------------+
| Field        | Value                            |
+--------------+----------------------------------+
| enabled      | True                             |
| id           | dff8cbe02c7c4c2abab35b2cadecfa2d |
| interface    | internal                         |
| region       | RegionOne                        |
| region_id    | RegionOne                        |
| service_id   | 77a8311bf45749b3b2d47287520c52f2 |
| service_name | glance                           |
| service_type | image                            |
| url          | http://controller:9292           |
+--------------+----------------------------------+
```

ENDPOINT INTERNAL AND ADMIN

```
fjwu@server1:~$ openstack endpoint create --region RegionOne image internal http://server1:9292
+--------------+----------------------------------+
| Field        | Value                            |
+--------------+----------------------------------+
| enabled      | True                             |
| id           | 7c7c9646cf73450a9d942e3fa66c7ee2 |
| interface    | internal                         |
| region       | RegionOne                        |
| region_id    | RegionOne                        |
| service_id   | 74c7c6347d244960ad0ea28fc4c83b5e |
| service_name | glance                           |
| service_type | image                            |
| url          | http://server1:9292              |
+--------------+----------------------------------+
fjwu@server1:~$ openstack endpoint create --region RegionOne image admin http://server1:9292
+--------------+----------------------------------+
| Field        | Value                            |
+--------------+----------------------------------+
| enabled      | True                             |
| id           | a0667c34676846f4a0427986da217141 |
| interface    | admin                            |
| region       | RegionOne                        |
| region_id    | RegionOne                        |
| service_id   | 74c7c6347d244960ad0ea28fc4c83b5e |
| service_name | glance                           |
| service_type | image                            |
| url          | http://server1:9292              |
+--------------+----------------------------------+
fjwu@server1:~$
```

CHECK ENDPOINTS

```
+--------------+----------------------------------+
fjwu@controller:~$ openstack endpoint list
+----------------------------------+-----------+--------------+--------------+--
-------+-----------+-----------------------------+
| ID                               | Region    | Service Name | Service Type | E
nabled | Interface | URL                         |
+----------------------------------+-----------+--------------+--------------+--
-------+-----------+-----------------------------+
| 72135fc1412d4b6b9a7b1a57df754c8d | RegionOne | keystone     | identity     | T
rue    | admin     | http://controller:5000/v3/  |
| 9d89952a6cfc4c849c846253c76f0502 | RegionOne | glance       | image        | T
rue    | admin     | http://controller:9292      |
| b66a79d3b1294cbfbcb558ceb776b2c9 | RegionOne | keystone     | identity     | T
rue    | internal  | http://controller:5000/v3/  |
| bcda4d4a7dda4958a13c42b1f83da081 | RegionOne | keystone     | identity     | T
rue    | public    | http://controller:5000/v3/  |
| cd06c95c447240dea56c625b05d722c7 | RegionOne | glance       | image        | T
rue    | public    | http://controller:9292      |
| dff8cbe02c7c4c2abab35b2cadecfa2d | RegionOne | glance       | image        | T
rue    | internal  | http://controller:9292      |
+----------------------------------+-----------+--------------+--------------+--
```

STEP 4

INSTALL GLANCE

```
fjwu@controller:~$ sudo su -
root@controller:~# apt install glance
```

GO TO THIS FILE AND MAKE THESE CHANGES

```
root@controller:~# vim /etc/glance/glance-api.conf
```

```
[database]
#connection = sqlite:////var/lib/glance/glance.sqlite
connection =mysql+pymysql://glance:glanceDBPass@controller/glance
backend = sqlalchemy

#
# From oslo.db
#
```

```
#
# Related Options:
#     * config_file
#
#   (string value)
 flavor = keystone

#
# Name of the paste configuration file.
#
# Provide a string value representing the name of the paste
# configuration file to use for configuring piplelines for
# server application deployments.
#
```

```
[keystone_authtoken]

#
# From keystonemiddleware.auth_token
#

# Complete "public" Identity API endpoint. This endpoint should not be a
# "admin" endpoint, as it should be accessible by all end users. Unauthe
# clients are redirected to this endpoint to authenticate. Although this
# endpoint should ideally be unversioned, client support in the wild var
# you're using a versioned v2 endpoint here, then this should *not* be t
# endpoint the service user utilizes for validating tokens, because norm
# users may not be able to reach that endpoint. (string value)
# Deprecated group/name - [keystone_authtoken]/auth_uri
#www_authenticate_uri = <None>

www_authenticate_uri = http://controller:5000
# DEPRECATED: Complete "public" Identity API endpoint. This endpoint sho
# be an "admin" endpoint, as it should be accessible by all end users.
# Unauthenticated clients are redirected to this endpoint to authenticat
# Although this endpoint should ideally be unversioned, client support i
```

STEP 5

AFTER THAT, GO TO THIS FILE AND MAKE CHANGES

```
root@controller:~# vim /etc/glance/glance-registry.conf
```

```
# endpoint the service user utilizes for validating tokens, becau
# users may not be able to reach that endpoint. (string value)
# Deprecated group/name - [keystone_authtoken]/auth_uri
#www_authenticate_uri = <None>

www_authenticate_uri = http://controller:5000
auth_url = http://controller:5000
memcached_servers = controller:11211
auth_type = password
project_domain_name = Default
user_domain_name = Default
project_name = service
username = glance
password = 2003

# DEPRECATED: Complete "public" Identity API endpoint. This endpo
# be an "admin" endpoint, as it should be accessible by all end u
```

```
# Authentication type to load (string value)
# Deprecated group/name - [keystone_authtoken]/auth_plugin
#auth_type = <None>

auth_type = password
project_domain_name =Default
user_domain_name = Default
project_name = service
username = glance
password = glancePass
# Config Section from which to load plugin specific options (string value)
#auth_section = <None>
```

```
#
# This option is scheduled for removal in the Stein developmen
# cycle.
#stores = file,http
stores=file,http
#DEPRECATED:
# The default scheme to use for storing images.
#
# Provide a string value representing the default scheme to us
# storing images. If not set, Glance uses ``file`` as the defa
# scheme to store images with the ``file`` store.
```

```
# This option is deprecated against new config option
# ``default_backend`` which acts similar to ``default_store`` config
# option.
#
# This option is scheduled for removal in the Stein development
# cycle.
#default_store = file
default_store = file
# DEPRECATED:
# Minimum interval in seconds to execute updating dynamic storage
# capabilities based on current backend status.
#
# Provide an integer value representing time in seconds to set the
```

```
#     * ``filesystem_store_datadirs``
#     * ``filesystem_store_file_perm``
#
#  (string value)
#filesystem_store_datadir = /var/lib/glance/images
filesystem_store_datadir = /var/lib/glance/images
#
# List of directories and their priorities to which the filesystem
# backend store writes images.
#
# The filesystem store can be configured to store images in multiple
# directories as opposed to using a single directory specified by the
```

ON SERVER 1

```
ERROR 1045 (28000): Access denied for user 'glance'@'controller' (using password: )
fjwu@controller:~$ mysql -uglance -p -h controller
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 33
Server version: 10.1.48-MariaDB-0ubuntu0.18.04.1 Ubuntu 18.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| glance             |
| information_schema |
+--------------------+
2 rows in set (0.00 sec)
```

```
root@controller:~# su -s /bin/sh -c "glance-manage db_sync" glance
/usr/lib/python2.7/dist-packages/oslo_db/sqlalchemy/enginefacade.py:1352: OsloDB
DeprecationWarning: EngineFacade is deprecated; please use oslo_db.sqlalchemy.en
ginefacade
  expire_on_commit=expire_on_commit, _conf=conf)
2024-01-03 22:10:20.820 4451 INFO alembic.runtime.migration [-] Context impl MyS
QLImpl.
```

```
Upgraded database to: rocky_contract02, current revision(s): rocky_contract02
INFO  [alembic.runtime.migration] Context impl MySQLImpl.
INFO  [alembic.runtime.migration] Will assume non-transactional DDL.
Database is synced successfully.
```

STEP 6

GO TO DATABASE AND CHECK THE TABLES

```
MariaDB [(none)]> use glance;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [glance]> show tables;
+----------------------------------+
| Tables_in_glance                 |
+----------------------------------+
| alembic_version                  |
| image_locations                  |
| image_members                    |
| image_properties                 |
| image_tags                       |
| images                           |
| metadef_namespace_resource_types |
| metadef_namespaces               |
| metadef_objects                  |
| metadef_properties               |
| metadef_resource_types           |
| metadef_tags                     |
| migrate_version                  |
| task_info                        |
| tasks                            |
+----------------------------------+
15 rows in set (0.00 sec)

MariaDB [glance]> _
```

RESTART THE SERVICES

```
root@controller:~# service glance-registry restart
root@controller:~# ^C
root@controller:~# systemctl enable glance-registry
Synchronizing state of glance-registry.service with SysV service script with /li
b/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable glance-registry
root@controller:~#
```

```
root@controller:~# service glance-api restart
root@controller:~# systemctl enable glance-api
Synchronizing state of glance-api.service with SysV service script with /lib/sys
temd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable glance-api
root@controller:~#
```

STEP 7

DOWNLOAD THE CIRROS IMAGE

```
fjwu@controller:~$ source admin-openrc
fjwu@controller:~$ wget http://download.cirros-cloud.net/0.4.0/cirros-0.4.0-x86_
64-disk.img
--2024-01-03 22:18:22--  http://download.cirros-cloud.net/0.4.0/cirros-0.4.0-x86
_64-disk.img
Resolving download.cirros-cloud.net (download.cirros-cloud.net)... 69.163.176.18
3, 2607:f298:6:a014::c3e:9bd6
Connecting to download.cirros-cloud.net (download.cirros-cloud.net)|69.163.176.1
83|:80... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://github.com/cirros-dev/cirros/releases/download/0.4.0/cirros-0.
4.0-x86 64-disk.img [following]
```

VERIFY IT

```
fjwu@controller:~$ ls
admin-openrc  cirros-0.4.0-x86_64-disk.img  demo-openrc  snap
fjwu@controller:~$ openstack image create "cirros" --file cirros-0.4.0-x86_64-di
sk.img --disk-format qcow2 --container-format bare --public
+------------------+------------------------------------------------------------
------------------------------------------------------------------------------
+
| Field            | Value

|
+------------------+------------------------------------------------------------
------------------------------------------------------------------------------
+
| container_format | bare

|
| created_at       | 2024-01-03T17:22:03Z
```

RUN THE FOLLOWING COMMAND.

OPENSTACK IMAGE CREATE “CIRROS”\

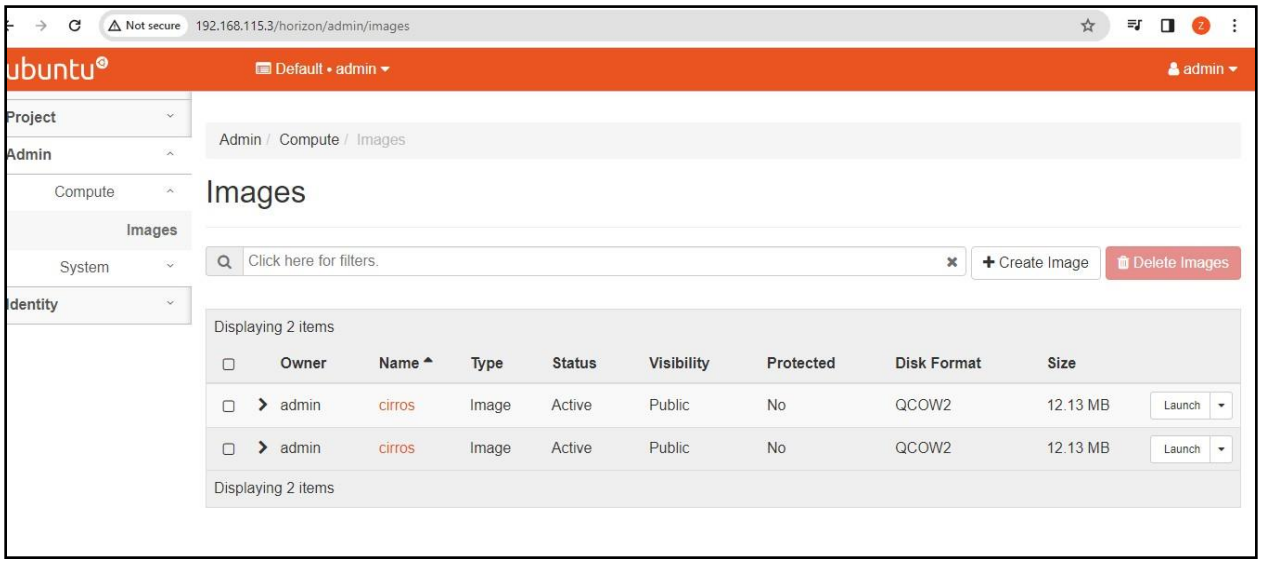
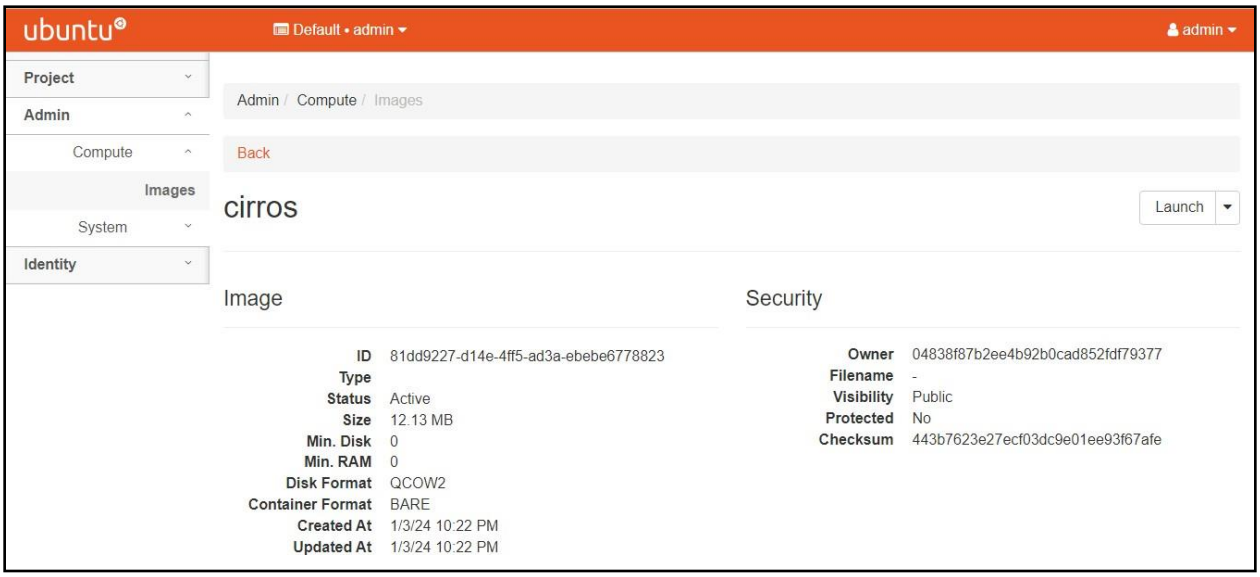
```
created_at       | 2024-01-05T04:38:08Z
                 |
disk_format      | qcow2
                 |
file             | /v2/images/952d0bff-beal-4dbl-9b52-b9922bblbdf3/file
                 |
id               | 952d0bff-beal-4dbl-9b52-b9922bblbdf3
                 |
min_disk         | 0
                 |
min_ram          | 0
                 |
name             | cirros
                 |
owner            | 68b46bc295c24ef79c51f06e6fdafcaa
```

```
fjwu@controller:~$ openstack image list
+--------------------------------------+--------+--------+
| ID                                   | Name   | Status |
+--------------------------------------+--------+--------+
| 30beff20-a338-4cd5-99ab-c5e20244d1f5 | cirros | active |
| 81dd9227-d14e-4ff5-ad3a-ebebe6778823 | cirros | active |
+--------------------------------------+--------+--------+
```

STEP 8

OPEN OPENSTACK DASHBOARD

ADMIN-IMAGES



INFO OF IMAGE